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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,554	11/10/1999	ERLAND R. SANDSTROM	2160-(FJ-99-	8154

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EXAMINER

PATTERSON, MARC A

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 10/18/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-14

<b>Office Action Summary</b>	Application No. 09/437,554	Applicant(s) SANDSTROM ET AL.	
	Examiner Marc A Patterson	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 June 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6, 8-24, 26, 28-44, 46, 48-50, 74, 77-85, 90 and 91 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-24, 26, 28-44, 46, 48-50, 74, 77-85, 90 and 91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

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## DETAILED ACTION

### WITHDRAWN REJECTIONS

1. The 35 U.S.C. 102(b) rejection of Claims 1, 77, 80 and 82 as being anticipated by Mc Chesney et al. (U.S. Patent No. 3,984,498), 35 U.S.C. 102(b) rejection of Claim 74 as being anticipated by Andersen et al. (U.S. Patent No. 5,506,046), 35 U.S.C. 103(a) rejection of Claims 2 – 50 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 78 – 79 and 81 as being unpatentable over Mc Chesney et al (U.S. Patent No. 3,984,498) and 35 U.S.C. 103(a) rejection of Claims 83 – 85 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439), of record on page 2 of the previous Action, are withdrawn.

### REPEATED REJECTIONS

2. The 35 U.S.C. 112 second paragraph rejection of Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74 and 77 – 85, of record on page 2 of the previous Action, is repeated.

### NEW REJECTIONS

#### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74, 77 – 85 and 90 – 91 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase

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'characterized by a base diameter' is indefinite, as its meaning is unclear. For purposes of examination, the phrase will be assumed to mean 'comprising a base diameter.'

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 4, 6, 11 – 24, 26, 28 – 29, 30 – 35, 37 – 44, 46, 48 – 50 and 90 – 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337).

With regard to Claims 1 and 50, Willbrandt discloses a container (cup; column 1, lines 8 – 15) formed from a polymeric material (a styrene; column 6, lines 12 – 26); the cup comprises a base (it therefore forms the bottom of the cup and defines an outer edge, and comprises a base diameter; column 2, lines 3 – 18), and a sidewall (it is therefore integrally formed with the base extending upwardly from the outer edge; column 2, lines 19 – 35) having a thickness of 20 – 40 mils (0.020 to 0.040 inches; column 4, lines 35 – 53) and defining a rim about its upper extremity (the rim is therefore integrally formed with the sidewall, and is a solid polymer bead as it defines an opening; column 5, lines 10 – 20); the sidewall extends upwardly with a taper (column 3, lines 46 – 51); the opening defined by the rim has a diameter which is longer than the base diameter (column 4, lines 35 – 53); the rim has a thickness which is five times greater than the thickness of the adjacent portion of the sidewall (it has a thickness of 0.15 inches, which is

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five times greater than the thickness of the sidewall, which is 0.03 inches; column 4, lines 35 – 53; column 5, lines 21 – 29).

With regard to Claims 6, 26, and 46, as stated previously, the rim has a thickness and height of 0.15 inches, which is five times the thickness of the sidewall.

With regard to Claims 8 – 9 and 28 – 29 and 48 – 49, as stated previously, the cup comprises polystyrene, and is therefore transparent.

With regard to Claims 13 – 15 and 33 – 35, as stated previously, the sidewall thickness is 20 – 40 mils.

With regard to Claim 16 the base is circular (column 3, lines 21 – 25), and the sidewall includes a pattern which alters the cylindrical character of the sidewall and is operative as a grip portion (a portion of the sidewall is fluted, and can therefore be gripped; column 3, lines 51 – 64).

With regard to Claims 90 – 91, the rim is disclosed by Willbrandt is circular (it has a diameter,  $R_4$ ; column 47 – 53), and therefore has a circular profile and a curved profile.

With regard to Claims 2 – 4, 11 – 12, 17 – 24, 30 – 32 and 37 – 44, Willbrandt fails to disclose a container in which the ratio of the height of the tumbler to the inside diameter of the sidewall is 2 – 4, and the ratio of the height of the tumbler to the inside diameter of the sidewall is 1 – 5, and the ratio of the height of the tumbler to the inside diameter of the sidewall is 1.3 – 1.7, and the volume is 12 – 15 ounces, and the volume is 16 ounces, and the volume is 1.5 – 4 times the volume of the parison, and the height is 5.75 – 6 inches, and the height is 4.6 – 4.8 inches, and the sidewall has a taper angle of 1 – 4.5 degrees, and a taper angle of 2.75 to 4 degrees, and a taper angle of 3 degrees, and a taper angle of 2.5 – 10 degrees and a taper angle of

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4.5 – 10 degrees, and a taper angle of 1 – 10 degrees. However, Willbrandt discloses a container in which the sidewall has a taper angle of less than 1 degree (the corner is tapered and has a radius of 0.0930 inch; column 3, lines 46 – 51), and a ratio of the height of the tumbler to the inside diameter of the sidewall of 1.75 (column 4, lines 54 – 65), and a volume of 32 ounces (column 4, lines 35 – 53) and a height of 6.9 inches (column 4, lines 35 – 53).

It therefore would have been obvious for one of ordinary skill in the art to modify the angle of taper, and the ratio of the height of the tumbler to the inside diameter of the sidewall, and the volume of the container, and therefore the volume relative to the parison, and the height, as these parameters would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result since the Willbrandt reference shows the different parameters. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

As to the claimed aspects of the container being ‘injection blow molded,’ and prepared from an ‘injection molded parison,’ Willbrandt discloses that the cup is made by injection molding or blow molding (column 5, lines 30 – 34); the claimed aspects of the cup being ‘injection blow molded’, and prepared from an ‘injection molded parison,’ therefore read on Willbrandt. Furthermore, the claimed aspects of the tumbler being ‘injection blow molded’ and prepared from an ‘injection molded parison’ and the volume of the container being 1.5 – 4 times the volume of the parison are directed to process limitations, and therefore given little patentable weight.

7. Claims 10 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Tyler (U.S. Patent No. 4,446,969).

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Willbrandt discloses an injection blow molded container as discussed above. With regard to Claim 10, Willbrandt fails to disclose a container comprising a sidewall provided with a molded in design comprising a series of triangular ridges having a wall thickness the same as the rest of the container.

Tyler teaches the use of a series of triangular ridges (column 5, lines 13 – 29; column 6, lines 1 – 11) in an injection – molded container (the ridges are therefore molded – in; column 2, lines 35 – 44) for the purpose of providing resistance to collapse during lidding (column 2, lines 54 – 56).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a series of triangular ridges in Willbrandt in order to provide resistance to collapse during lidding as taught by Tyler.

With regard to the claimed aspect of the ridges 'having a wall thickness the same as the rest of the container,' Willbrandt teaches a thickness for ridges (flutes) of the container which is the same as that of the rest of the container (0.03 inches; column 3, lines 52 – 64; column 4, lines 35 – 53); the claimed aspect of the ridges 'having a wall thickness the same as the rest of the container' therefore reads on Willbrandt.

8. Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Andersen et al. (U.S. Patent No. 5,506,046).

Willbrandt discloses a molded container comprising a styrene as discussed above. Willbrandt fails to disclose a container comprising styrene – butadiene which is filled with nanometer – sized particles having a size in the range of visible – light wavelengths.

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Andersen et al teaches the use of a composition comprising styrene – butadiene (column 26, lines 17 – 25) which is filled with nanometer – sized particles having a size in the range of visible – light wavelengths (10 nanometer to 100 micrometer; column 18, lines 49 – 59); the composition is used in the making of drinking tumblers (beverage containers; column 21, lines 28 – 36); for the purpose of making containers having good strength and durability (column 21, lines 21 – 36).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for nanometer – sized particles having a size in the range of visible – light wavelengths in Willbrandt in order to make containers having good strength and durability as taught by Andersen et al.

9. Claims 77 – 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Mc Chesney et al (U.S. Patent No. 3,984,498).

Willbrandt discloses a molded container comprising a styrene as discussed above. With regard to Claims 77, 80 and 82, Willbrandt fails to disclose a container which consists essentially of styrene – butadiene copolymer blended with styrene – acrylonitrile copolymer and which comprises an impact modifier.

Mc Chesney teach the use of a styrene – butadiene copolymer blended with styrene – acrylonitrile copolymer (which is a rubber, and therefore constitutes an impact modifier; column 4, lines 1 – 12) in the making of a molded container (column 2, lines 22 – 39) for the purpose of making a container having improved resistance to creep strain (the bottle therefore consists essentially of the copolymer; column 1, lines 48 – 56).



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With regard to Claims 78 – 79 and 81, Mc Chesney et al. fail to disclose a container in which the amount of butadiene in the copolymer is from 2 – 40 percent, and a container which consists of a blend of polystyrene – acrylonitrile with styrene – butadiene copolymer. However, Mc Chesney discloses a container in which the amount of butadiene in the copolymer is 51 percent (a major proportion; column 2, lines 51 – 61).

It would be obvious for one of ordinary skill in the art to vary the amount of butadiene in the copolymer and the amount of copolymer blend in the polymeric material, since the amount of butadiene in the copolymer and the amount of copolymer blend in the polymeric material would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end result, since the Mc Chesney reference shows the two parameters. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

10. Claims 83 – 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439).

Willbrandt discloses an injection blow molded container comprising a styrene polymer as discussed above. With regard to Claims 83 – 85, Willbrandt fails to disclose a container comprising 8 – 20% by weight of a mineral filler.

Kawakami et al disclose that it is well known in the art to injection blow mold (stretch blow mold; column 13, lines 45 – 57) a polymer comprising styrene – butadiene (column 11, lines 26 – 48) comprising 0 – 50% by weight of a mineral filler (column 11, lines 8 – 25), for the purpose of forming a container which has high barrier properties (column 1, lines 5 – 18).

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It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 8 – 20% by weight of a mineral filler in Willbrandt in order to form a container which has high barrier properties as taught by Kawakami et al.

#### ANSWERS TO APPLICANT'S ARGUMENTS

11. Applicant's arguments, and amended claims, regarding the 35 U.S.C. 102(b) rejection of Claims 1, 77, 80 and 82 as being anticipated by Mc Chesney et al. (U.S. Patent No. 3,984,498), 35 U.S.C. 102(b) rejection of Claim 74 as being anticipated by Andersen et al. (U.S. Patent No. 5,506,046), 35 U.S.C. 103(a) rejection of Claims 2 – 50 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 78 – 79 and 81 as being unpatentable over Mc Chesney et al (U.S. Patent No. 3,984,498) and 35 U.S.C. 103(a) rejection of Claims 83 – 85 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6001439), of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn. The new 35 U.S.C. 112 second paragraph rejections of Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74, 77 – 85 and 90 – 91, 35 U.S.C. 103(a) rejection of Claims 1 – 4, 6, 11 – 24, 26, 28 – 29, 30 – 35, 37 – 44, 46, 48 – 50 and 90 – 91 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 10 and 36 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Tyler (U.S. Patent No. 4,446,969), 35 U.S.C. 103(a) rejection of Claim 74 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Andersen et al. (U.S. Patent No. 5,506,046), 35 U.S.C. 103(a) rejection of Claims 77 –

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82 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Mc Chesney et al (U.S. Patent No. 3,984,498) and 35 U.S.C. 103(a) rejection of Claims 83 – 85 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439) above are directed to amended Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74, 77 – 85 and 90 – 91.

Applicant has not responded to the 35 U.S.C. 112 second paragraph rejection of Claims 1 – 50, 74 and 77 – 83, of record on page 2 of the previous Action, with regard to the meaning of the term ‘fortified.’ The rejection is therefore repeated.

On page 6 of Paper No. 12, Applicant has amended non – elected Claims 61 – 68, and on page 8, Applicant has added new Claims 86 – 89, which are dependent on Claim 61. Correction and / or clarification is required.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

*Marc Patterson*  
Art Unit 1772

*Harold Pyon*  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER 12/18/02  
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